Claims:

1. A catalyst composition comprising a pentasil-type of zeolite, one or more solid acidic cracking promoters.

2. The catalyst composition of Claim 1 comprising a filler and/or binder.

3. The catalyst composition of Claim 1 wherein said pentasil zeolite is selected from thegroup consisting of ITQ-type zeolite, beta zeolite and silicalite.

4. The catalyst composition of Claim 1 wherein said pentasil zeolite comprises ZSM-type zeolite.

5. The catalyst composition of Claim 1 wherein said pentasil zeolite is doped with a compound comprising a metal ion selected from the group consisting of ions of alkaline earth metals, transition metals, rare earth metals, phosphorous, boron, aluminum, noble metals and combinations thereof.

6. The catalyst composition of Claim 1 where in said pentasil zeolite comprises crystals having metals in tetrahedral coordination in said crystals selected from the group consisting of Al, As, B, Be, Co, Cr, Fe, Ga, Hf, In, Mg, Mn, Ni, P, Si, Ti, V, Zn, Zr and mixtures thereof.

7. The catalyst composition of Claim 1 wherein said solid acidic cracking promoter is selected from the group consisting of alumina modified by incorporation of acid centers thereon or therein, acidic silica-alumina co-gels, acidic natural or synthetic clays, acidic titania, acidic zirconia, acidic titania-alumina, acidic zeolite materials and co-gels of titania, alumina, zirconia, phosphates, borates, aluminophosphates, tungstates, molybdates and mixtures thereof.

8. The catalyst composition of Claim 7 wherein said acid centers are selected from the group consisting of halides, sulfates, nitrates, titanates, zirconates, phosphates, borates, silicates and mixtures thereof.

9. The catalyst composition of Claim 7 wherein said solid acidic cracking promoter comprises acidic silica-alumina, titania-alumina, titania/zirconia, alumina/zirconia or aluminum phosphate co-gels modified by the incorporation therein of metal ions or compounds selected from the group consisting of alkaline earth metals, transition metals, rare earth metals and mixtures thereof.

10. The catalyst composition of Claim 7 wherein said acidic silica-alumina co-gels have been subjected to hydrothermal treatment.

11. The catalyst composition of Claim 7 wherein said acidic natural or synthetic clays have been modified by calcining, steaming, dealumination, desilification, ion exchange, pillaring exfoliation or combinations thereof.

12. The catalyst composition of Claim 7 wherein said acid titania, acidic zirconia, or both are doped with sulfates, vanadates, phosphates, tungstates, borates, iron, rare earth metals or mixtures thereof.

13. The catalyst composition of Claim 7 wherein said acidic zeolite materials are selected from the group consisting of mordenite, NaY zeolite and USY zeolite that is dealuminated or ion exchanged with transition metals or both.

14. The catalyst composition of Claim 13 wherein said transition metal is vanadium.

15. The catalyst composition of Claim 1 wherein said solid acidic cracking promoter comprises a co-gel of alumina-aluminum-phosphate or aluminum phosphate that has been doped with an acidic compound.

16. The catalyst composition of Claim 1 comprising one or more additional materials selected from the group consisting of particle binders, diluents, fillers and extenders.

17. The catalyst composition of Claim 1 wherein the weight ratio of said pentasil-type zeolite to said solid acidic cracking promoter is from about 0.03 to 9.0.

18. The catalyst composition of Claim 15 wherein said pentasil-type zeolite is a pentasil type of zeolite that comprises from about 5.0 wt% to about 80 wt% of said composition.

19. The catalyst composition of Claim 1 wherein said solid acidic cracking promoter comprises from about 5.0 wt% to about 80 wt% of said composition.

20. The catalyst composition of Claim 1 wherein said composition comprises particles having average lengths along their major axis of from about 20 microns to about 200 microns.

21. The catalyst composition of Claim 16 wherein said composition comprises particles having average lengths along their major axis of from about 30 microns to about 150 microns.

22. A method of making the catalyst composition of Claim 1 wherein an aqueous slurry comprising said pentasil-type zeolite and said solid acidic cracking promoter is prepared and dried.

23. The method of Claim 22 wherein separate aqueous slurries of said pentasil-type zeolite and said solid acidic cracking promoter are prepared, mixed together and dried.

24. A method of making the catalyst composition of Claim 5 wherein said pentasil-type zeolite is doped by ion exchange with said ions.

25. A method of making the catalyst composition of Claim 5 wherein said pentasil-type zeolite is doped by using doped seeds.

26. A method of making the catalyst composition of Claim 5 wherein said pentasil-type zeolite is doped by using doped reactants

27. A method of making the catalyst composition of Claim 5 wherein said pentasil-type zeolite is doped by using seeds comprising X- or Y-type zeolites that have been ion exchanged with said ions.

28. A method of making the catalyst composition of Claim 5 wherein said pentasil-type zeolite is doped by incorporating salts comprising said ions in a reaction mixture comprising the precursor of said pentasil-type zeolite.

29. The method of Claim 21 wherein said aqueous slurry is spray dried to obtain catalyst particles having average lengths along their major axis of from about 40 microns to about 100 microns.

30. A method of making the catalyst composition of Claim 16 wherein said pentasil-type zeolite has been modified by being ion exchanged with ions selected from the group consisting of ions of alkaline earth metals, transition metals, rare earth metals,

phosphorous, boron, aluminum, noble metals and combinations thereof, preparing an aqueous slurry of said acidic cracking promoter and other catalyst ingredients other than said modified pentasil-type zeolite, adding said modified pentasil-type zeolite to said slurry and shaping said slurry, said addition of said modified pentasil-type zeolite being carried out as a final step immediately prior to said shaping.

31. The method of Claim 30 wherein said addition of said modified pentasil-type zeolite comprises mixing with said aqueous slurry until said slurry is substantially homogeneous.

32. The method of Claim 30 wherein said shaping comprises spray drying.

33. The method of Claim 30 wherein NH_4OH is added to said slurry prior to the addition of said modified pentasil-type zeolite to raise the pH of said slurry.

34. The method of Claim 30 wherein a pH buffer is added to said slurry prior to the addition of said modified pentasil-type zeolite.

35. The method of Claim 34 wherein said pH buffer is selected from the group consisting of aluminum chlorohydrol, phosphate sol or gel, anionic clay, smectite and thermally or chemically modified clay.

36. The method of Claim 35 wherein said thermally or chemically modified clay is kaolin clay.

37. A method for preparing the catalyst of Claim 1 wherein an aqueous slurry is prepared comprising said solid acidic cracking promoter and precursors of said pentasil-type zeolite comprising silica, alumina and seeds containing one or more metals from the group consisting of rare earth metals, alkaline earth metals and

transition group metals, forming said aqueous slurry into shaped bodies and crystallizing said pentasil-type zeolite in situ in said shaped body.

38. A process for producing olefins having up to about 12 carbon atoms per molecule comprising contacting a petroleum feedstock at fluid catalytic cracking conditions with the catalyst composition of Claim 1.

39. A process for producing olefins having up to about 6 carbon atoms per molecule comprising contacting a petroleum feedstock at fluid catalytic cracking conditions with the catalyst composition of Claim 1.

40. The process of Claim 38 wherein said catalyst composition comprises about 5.0 to about 80 wt% of a mixture of said catalyst composition and a second fluidized catalytic cracking catalyst composition.